

Fifth Workshop on Millimetre Astronomy in Italy



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Michele Ginolfi - Understanding teenage galaxies at the end of cosmic reionization (Invited)

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I will summarise recent and ongoing research highlights from the ALPINE survey, an ALMA large program that observed dust continuum and [CII] emission in a statistical sample of normal star-forming galaxies at $z=4-6$, highlighting their significance to our understanding of early galaxy evolution. Combined with ancillary data at UV through near-IR wavelengths, ALPINE provides the currently largest multi-wavelength sample of post-reionization galaxies and has advanced our understanding of (i) the interstellar medium properties and star formation activity, (ii) the gas content, (iii) outflows and metal enrichment of the circumgalactic medium and (v) the kinematics and merger rates, in galaxies at $z>4$. ALPINE builds the basis for more detailed measurements with the current and next generations of big telescopes, and I will show an overview of a number of legacy programs that are already being carried out with ALMA and JWST.